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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,192	01/30/2004	Andrew L. Van Brocklin	200311837-1	5038

22879 7590 05/02/2007
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INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

COLEMAN, VANESSA V

ART UNIT	PAPER NUMBER
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2627

MAIL DATE	DELIVERY MODE
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05/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/767,192

Applicant(s)

VAN BROCKLIN ET AL.

Examiner

Vanessa (Brandi) Coleman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-25 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 26,27,31 and 32 is/are objected to.
- 8) ☒ Claim(s) 1-32 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-22, drawn to a method and program product of calibrating an optical pick-up unit, including the steps of (a) applying a known voice coil slew rate to a lens, at first location on a disc; (b) moving the lens through a distance range which includes a distance at which the lens is in optimum focus; (c) monitoring a sum signal while the lens moves through the distance range; (d) identifying a peak in the sum signal corresponding to the distance at which the lens is in optimum focus; (e) calculating a sum signal slew rate from the sum signal peak corresponding to the distance at which the lens is in optimum focus; and (f) calculating a voice coil gain using the calculated sum signal slew rate, classified in class 369, subclass 44.29.

II. Claims 23-32, drawn to a laser imagible and an optical drive including a lens; a media tray; and an adjustment mechanism configured (a) to determine a voice coil gain for substantially all locations on a media, classified in class 369, subclass 53.28.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus of Group II can be used to practice a process where the coil gain is determined using a focus error signal.

3. During a telephone conversation with Attorney Matthew Wade on April 16, 2007 a provisional election was made without traverse to prosecute the invention of Group II, claims 23-32. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

1. The disclosure is objected to because of the following informalities: The specification refers to Figures 5A and 5B, however there is neither a Figure 5A nor Figure 5B included in the drawings.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 23-24 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi, European Patent Publication number EP1385154 (Hayashi), in view of Ando, US Patent Publication number US 2004/0013056 (Ando).

Regarding Claim 23, Hayashi discloses a laser imagible apparatus ("optical disk drive 2"; see Fig. 1) including: a lens ("objective lens 31"; see Fig. 2A), a media tray ("optical disk holding mechanism"; see [0023], lines 19-22), and an adjustment mechanism configured to determine a voice coil gain ("focus servomechanism"; see [0059] Col 15, lines 6-16).

Hayashi does not disclose a voice coil gain determined for substantially all locations on a media.

Ando discloses a laser imagible apparatus ("optical disk apparatus"; see Fig. 1) that determines a voice coil gain for substantially all locations on a media (see [0071-0072]).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the apparatus of Hayashi with the optical disk apparatus of Ando in order to provide for a more accurate focus position. Hayashi and Ando are analogous art because they both are drawn to optical disk devices.

Regarding Claim 24, Hayashi discloses the laser imagible apparatus wherein the adjustment mechanism is configured to adjust a distance between the lens and a media

on the media tray in response to the voice coil gain determined at each location on the media (see [0059] Col 15, lines 12-16).

Regarding Claim 25, Hayashi discloses the laser imagible apparatus wherein the adjustment mechanism is configured to adjust the lens to be at a predetermined offset distance with respect to a distance corresponding to an optimum focus

Hayashi does not disclose determining an optimum focus at substantially all locations on a media in the media tray.

Ando discloses an optical device that determines the optimum focus as substantially all locations on a disc (see [0071-0072]).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the apparatus of Hayashi with the optical disk apparatus of Ando in order to provide for a more accurate focus position. Hayashi and Ando are analogous art because they both are drawn to optical disk devices.

Regarding Claim 28, Hayashi discloses an optical drive ("optical disk drive 2"; see Fig. 1) including: a lens ("objective lens 31"; see Fig. 2A), a disc tray ("optical disk holding mechanism"; see [0023], lines 19-22), and a means for determining a voice coil gain ("focus servomechanism"; see [0059] Col 15, lines 6-16).

Hayashi discloses an optical drive but does not disclose a voice coil gain determined for substantially all locations on a disc.

Ando discloses an optical drive ("optical disk apparatus"; see Fig. 1) that determines a coil gain for substantially all locations on a disc (see [0071-0072]).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the apparatus of Hayashi with the optical disk apparatus of Ando in order to provide for a more accurate focus position. Hayashi and Ando are analogous art because they both are drawn to optical disk devices.

Regarding Claim 29, Hayashi discloses the optical drive further comprising means for adjusting a distance between the lens and a disc on the disc tray in response to the voice coil gain determined at each location on the disc ("focus servomechanism"; see [0059] Col 15, lines 12-16).

Regarding Claim 30, Hayashi discloses the optical drive, wherein the means for adjusting a distance between the lens and the disc is configured to adjust the lens to be at a predetermined offset distance with respect to a distance corresponding to an optimum focus

Hayashi does not disclose determining an optimum focus at substantially all locations on a disc in the disc tray.

Ando discloses an optical drive that determines the optimum focus as substantially all locations on a disc (see [0071-0072]).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the apparatus of Hayashi with the optical disk apparatus

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of Ando in order to provide for a more accurate focus position. Hayashi and Ando are analogous art because they both are drawn to optical disk devices.

Allowable Subject Matter

4. Claims 26, 27, 31, and 32 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record does not disclose or suggest a distance of 0 μm defined as the distance at which the lens of the laser imangible apparatus or optical drive is in optimum focus, that a predetermined offset distance is between about $-80 \mu\text{m}$ and $+20 \mu\text{m}$ toward the disc, or that the predetermined offset distance is about $30 \mu\text{m}$ toward the disc.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okumura, US 6,714,719 Ho, US 6,873,489; Nishiuchi, US 2005/0276177; which each detail calibration of focus servo systems in optical disk devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa (Brandi) Coleman whose telephone number is (571) 272-9081. The examiner can normally be reached on Mon-Thurs 8:30-6; 1st Fri off, 2nd Fri 8:30-5.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vanessa (Brandi) Coleman
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VC



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER